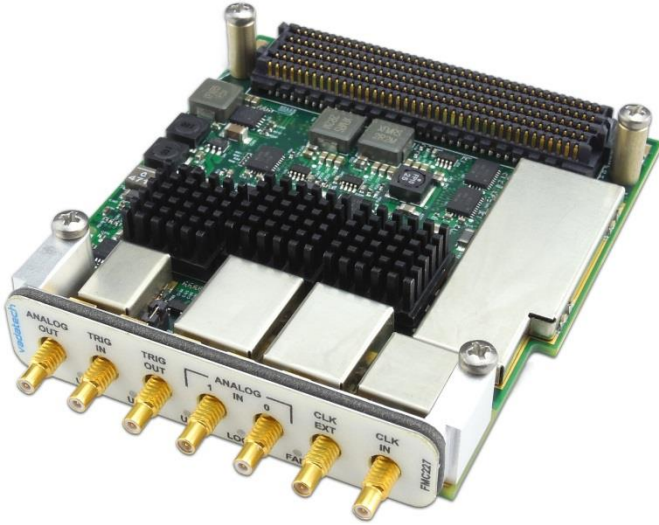![vadatech THE POWER OF VISION]

# FMC227 – FMC Dual ADC 12-bit @ 2.6 GSPS, Single DAC 14-bit @ 5.6 GSPS



**FMC, High Speed ADC**

## KEY FEATURES

- Dual AD9625 ADC
  - 4/6 JESD204B lanes from the ADC is routed to the FMC
  - 12-bit at 2.6 GSPS
  - Wide full power bandwidth supports IF sampling of signals up to 2 GHz
- Single DAC AD9129
  - 14-bit at 5.6 GSPS
- FPGA Mezzanine Card (FMC) per VITA 57
- Excellent dynamic performance
- Front panel interface includes CLK In, Trig In and Trig Out

## Benefits of Choosing VadaTech

- High dynamic range for versatility in video/broadcast requirements
- Ideal for Broadband communications systems, Wireless infrastructure, LTE, ATE, RADAR/Jamming
- Compatible with a broad range of Xilinx- and Altera-based FMC carriers from VadaTech and others
- Electrical, mechanical, software, and system-level expertise in house
- Full system supply from industry leader
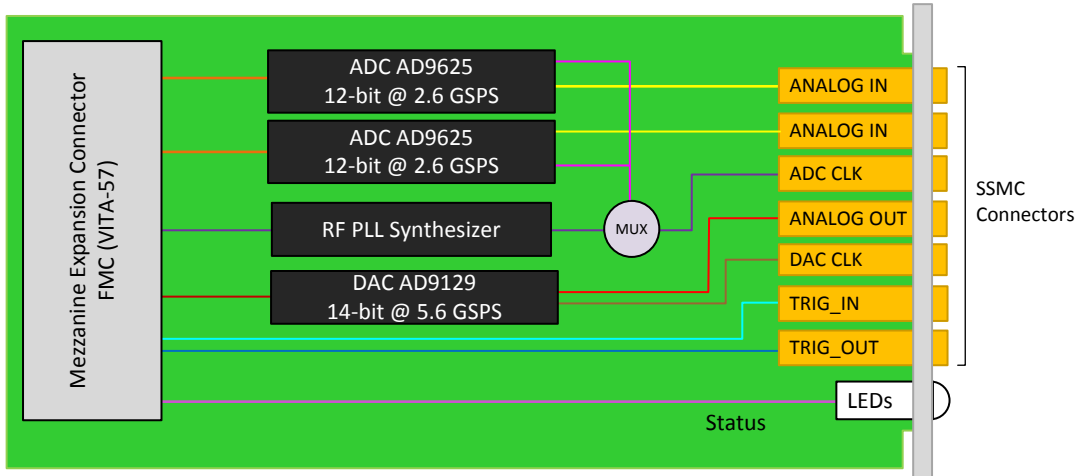- AS9100 and ISO9001 certified company

The FMC227 is an FPGA Mezzanine Carrier (FMC) per VITA 57 specification. The board has dual ADC and single DAC. The first ADC routes 6 lanes of JESD204B and the second ADC routes only 4 lanes.

The FMC227 utilizes dual AD9625 ADCs providing 12-bit conversion rates of up to 2.6 GSPS and a single DAC AD9129 providing 14-bit conversion rates of up to 5.6 GSPS.
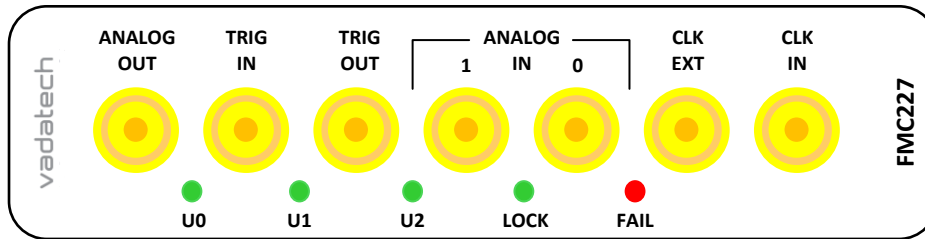
The analog input, digital output, clock and trigger interfaces of the FMC227 are routed via SSMC connectors. The internal clock frequency is programmable and the clock is capable of locking to an external reference.

## BLOCK DIAGRAM



## FRONT PANEL

## SPECIFICATIONS

| Architecture | | | |
|---|---|---|---|
| **Physical** | Dimensions | Single module | |
| | | Width 2.71" (69 mm) | |
| | | Depth 3.01" (76.5 mm) | |
| **Type** | FMC | Dual Port ADC with Single DAC | |
| | | Single FMC | |

| Standards | | | |
|---|---|---|---|
| **FMC** | VITA-57 | ANSI/VITA 57.1-2008 | |

| Configuration | | | |
|---|---|---|---|
| **Power** | FMC227 | ~8W | |
| **Environmental** | Temperature | Operating Temperature: -5° to 55° C (air flow requirements >400 LFM)) | |
| | | Storage Temperature: –40° to +85° C | |
| | Vibration | 1G, 5 to 500 Hz on each axis | |
| | Shock | 30Gs each axis | |
| | Relative Humidity | 5 to 95 percent, non-condensing | |
| **Front Panel** | Interface Connectors | SSMC | |
| | LEDs | Status | |
| **Conformal Coating** | | Humiseal 1A33 Polyurethane (Optional) | |
| | | Humiseal 1B31 Acrylic (Optional) | |

| Other | | | |
|---|---|---|---|
| **MTBF** | MIL Hand book 217-F @ TBD Hrs | | |
| **Certifications** | Designed to meet FCC, CE and UL certifications where applicable | | |
| **Standards** | VadaTech is certified to both the ISO9001:2000 and AS9100B:2004 standards | | |
| **Warranty** | Two (2) years | | |

**INTEGRATION SERVICES AND APPLICATION-READY PLATFORMS**

VadaTech has a full ecosystem of ATCA and µTCA products including chassis platforms, shelf managers, AMC modules, Switch and Payload Boards, Rear Transition Modules (RTM), Power Modules, and more. The company also offers integration services as well as pre-configured Application-Ready Platforms. Please contact VadaTech Sales for more information.

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## ORDERING OPTIONS

## FMC227 – A00 – 000 – G0J

**A = RF Sampling Clock**
0 = Via on Board PLL
1 = Direct RF Sampling

**G = FMC Board Spacing**
0 = 10 mm (per VITA-57 specification)
1 = 17.5 mm *

**J = Conformal Coating**
0 = Commercial (–5° to +55° C), No coating
1 = Commercial (–5° to +55° C), Humiseal 1A33 Polyurethane
2 = Commercial (–5° to +55° C),Humiseal 1B31 Acrylic
3 = Industrial (–20° to +70° C), No coating
4 = Industrial (–20° to +70° C), Humiseal 1A33 Polyurethane
5 = Industrial (–20° to +70° C), Humiseal 1B31 Acrylic
6 = Military (–40° to +85° C), Humiseal 1A33 Polyurethane*
7 = Military (–40° to +85° C), Humiseal 1B31 Acrylic*

* For use with carriers that require higher mating clearance, such as VadaTech AMC595. Requires full size AMC
** Edge of module for conduction cooled boards

## RELATED PRODUCTS



**AMC515 Virtex-7 FPGA**



**FMC214 Wideband Transceiver**



**FMC210 ADC FMC**

## CONTACT US